

PI  
a grain moisture analyzer assembly mounted ex-situ on said external wall of said combine; and

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means for bypassing a portion of the grain passing through said moving means through said grain moisture analyzer [.] including an inlet opening and an outlet opening formed in said external wall of said combine for supplying and exhausting grain to and from said grain moisture analyzer;

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a sensing cell for measuring grain moisture; and

feed means for moving the grain from said sensing cell to said outlet opening formed in said external wall for returning said portion of grain back into a normal flow of moving grain within the combine thresher.

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4. (Amended) A combine as set forth in claim [3] 1 including means for determining the grain moisture content when said sensing cell is filled with grain and establishing a control signal indicative thereof.

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9. (Amended) A continuous grain moisture analyzer assembly suitable for ex-situ mounting on an external surface of a combine harvester providing access to grain therein comprising;

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a sensing cell for measuring the moisture of grain filling said cell;

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detector means for sensing the full condition of said sensing cell and establishing a control signal indicative thereof; [and]

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flow means for moving grain from said sensing cell in response to the control signal from said detector means [.] ; and

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wherein said sensing cell includes an impedance cell having a plurality of plates to increase the measuring sensitivity of the moisture analyzer and with the external two plates being ground plates to reduce EMI and RFI interference thereby.

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12. (Amended) A grain analyzer as set forth in claim 11 wherein said operator interface module includes a first microprocessor connected to said [cell dual] detector means to actuate said flow means in response to said control signal from said detector means.

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16. (Amended) A method of providing continuous grain moisture readings of the grain being harvested to a combine harvester operator comprising the steps of:

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passing a portion of the grain being harvested from the combine to a moisture analyzer sensing cell mounted ex-situ of the combine;

PI  
filling said sensing cell with passed grain; [and]

PI  
actuating the passing of the grain from the sensor cell back to the combine to provide a continuous bypass of grain from the combine through the sensor cell and continuous moisture measurement thereby[.] ; and

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automatically setting the frequency of the cell voltage to an optimum frequency for detecting the broadest range of moisture sensed by the cell.

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17. (Amended) A method as set forth in claim 16 including the further calculating  
step of averaging of continuous grain moisture measurements over an operator  
determined period.

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24. (Amended) A grain moisture analyzing assembly as set forth in claim [23] ~~9~~  
wherein said plurality of plates is five plates with two central readout plates and three  
ground plates forming four separate measuring chambers.

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JDW  
09/26/96  
11/21/12  
Claim 30, line 1 change "29" to ----- 16 -----.

can be waived  
Claim 32, line 2 after "frequency" insert -----  $f^*$  via the known standard  
relationship  $f^* = 1/t$  -----.

Add new claims 33 and 34 as follows:

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33. A continuous grain moisture analyzer assembly suitable for ex-situ mounting on  
an external surface of a combine harvester providing access to grain therein  
comprising;

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a sensing cell for measuring the moisture of grain filling said cell;  
detector means for sensing the full condition of said sensing cell and  
establishing a control signal indicative thereof;  
flow means for moving grain from said sensing cell in response to the control  
signal from said detector means; and  
an operator interface module for controlling said analyzer assembly in response  
to operator inputs and control signals from said analyzer assembly.

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34. A method of providing continuous grain moisture readings of the grain being  
harvested to a combine harvester operator comprising the steps of;  
passing a portion of the grain being harvested from the combine to a moisture  
analyzer sensing cell mounted ex-situ of the combine;  
filling said sensing cell with the passed grain;  
actuating the passing of the grain from the sensor cell back to the combine to  
provide a continuous bypass of grain from the combine through the sensor cell and  
continuous moist measurement thereby; and  
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passing the portion of the grain to a sensing cell formed from an impedance  
moisture measuring cell having a plurality of plates for increased measurement  
sensitivity.

REMARKS